

Title (en)
SEAMLESS PIPE PIERCE-ROLLING PLUG, SEAMLESS PIPE PRODUCING DEVICE AND SEAMLESS PIPE PRODUCING METHOD USING THEM

Title (de)
STOPFEN ZUM LOCHWALZEN NAHTLOSER ROHRE, VORRICHTUNG ZUR HERSTELLUNG NAHTLOSER ROHRE UND DIESE VERWENDENDES VERFAHREN ZUR HERSTELLUNG NAHTLOSER ROHRE

Title (fr)
POINÇON DE LAMINAGE AVEC PERCEMENT POUR TUBE SANS SOUDURE, DISPOSITIF DE PRODUCTION DE TUBES SANS SOUDURE ET MÉTHODE DE PRODUCTION DE TUBE SANS SOUDURE À L'AIDE DE CEUX-CI

Publication
EP 1728566 A4 20071003 (EN)

Application
EP 05720580 A 20050311

Priority
• JP 2005004309 W 20050311
• JP 2004069005 A 20040311
• JP 2004068744 A 20040311

Abstract (en)
[origin: EP1728566A1] The present invention provides a seamless tube piercing/rolling plug and a seamless tube producing method in which piercing/rolling is performed with an inclined rotary piercing mill while the seamless tube piercing/rolling plug is used as a piercing tool. The seamless tube piercing/rolling plug is used while a front part and a rear part of the split plug are held as an integral plug, at least the front part is made of low alloy steel, and oxide films are formed on surfaces of the front part and rear part. The present invention also provides a seamless tube piercing/rolling apparatus and a seamless tube producing method in which the front part and/or rear part is replaceable in a tube making process line using the seamless tube piercing/rolling apparatus. In the seamless tube piercing/rolling apparatus, the front part and rear part are held as the integral plug, the front part and/or rear part is removably mounted, a mandrel bar holding the plug goes through the rear part, and the mandrel bar is coupled with the front part. It is preferable that a thickness of the oxide film formed in the front part be set to 200 µm or more while the oxide film formed in the front part is thicker than the oxide film formed in the rear part. Even if a hard working material is pierced/rolled, a seam defect and inside surface defects are eliminated, and excellent life-time of plug and excellent plug cost per production quantity can be achieved.

IPC 8 full level
B21B 25/00 (2006.01); **B21B 25/06** (2006.01)

CPC (source: EP US)
B21B 25/00 (2013.01 - EP US); **B21B 25/06** (2013.01 - EP US)

Citation (search report)
• [XAY] JP H09276910 A 19971028 - NIPPON STEEL CORP
• [Y] JP H10277610 A 19981020 - NIPPON STEEL CORP
• [Y] JP H10249412 A 19980922 - SUMITOMO METAL IND
• [Y] JP S63203205 A 19880823 - SUMITOMO METAL IND
• [XAY] US 1951087 A 19340313 - JAY DUNN JERRY
• [A] JP H02251304 A 19901009 - SUMITOMO METAL IND
• [A] JP S59225805 A 19841218 - KAWASAKI STEEL CO
• See references of WO 2005087401A1

Cited by
EP2889090A4; CN102441571A; EP2845655A4

Designated contracting state (EPC)
DE

DOCDB simple family (publication)
EP 1728566 A1 20061206; EP 1728566 A4 20071003; EP 1728566 B1 20120829; CN 1929933 A 20070314; CN 1929933 B 20101013; JP 4462265 B2 20100512; JP WO2005087401 A1 20080124; US 2007006626 A1 20070111; US 2008134742 A1 20080612; US 7383710 B2 20080610; US 7506526 B2 20090324; WO 2005087401 A1 20050922

DOCDB simple family (application)
EP 05720580 A 20050311; CN 200580007278 A 20050311; JP 2005004309 W 20050311; JP 2006510997 A 20050311; US 1030308 A 20080123; US 51743606 A 20060908